

RD28416-1

IN THE CLAIMS

1. (Currently Amended) A method for manufacturing an article, comprising:

disposing a managed heat transfer layer in operable communication with a second surface of a stamper, wherein a first surface of said stamper comprises surface features, wherein an exposed surface of said managed heat transfer layer has been altered by a method selected from the group consisting of chemically, ~~mechanically~~, or a combination thereof of chemically and mechanically;

disposing the stamper in a mold with at least a portion of said exposed surface disposed in operable communication with a mold half;

injecting a molten plastic into said mold;

cooling the plastic to form said ~~data storage media~~ article; and

releasing said ~~data storage media~~ article from said mold.

2. (Original) The method of Claim 1, further comprising forming a thickness of said managed heat transfer layer having a variation of less than about 5%.

3. (Currently Amended) The method of Claim 2, wherein forming said ~~substantially uniform~~ thickness further comprises surface lapping said exposed surface.

4. (Currently Amended) The method of Claim ~~3~~ 2, wherein said thickness varies less than about 3%.

5. (Original) The method of Claim 4, wherein said thickness varies less than about 1%.

6. (Original) The method of Claim 5, wherein said thickness varies less than about 0.5%.

7. (Currently Amended) The method of eClaim 23, wherein said lapping further comprises grinding with sand paper having a grit particle size of less than or equal to about 9 micrometers.

RD28416-1

8. (Currently Amended) The method of Claim 1, wherein said chemically altered exposed surface comprises a polymer chain length shorter than a non-chemically altered portion of said managed heat transfer layer.

9. (Original) The method of Claim 1, wherein said managed heat transfer layer comprises a material selected from the group consisting of thermoset materials, plastics, porous metals, ceramics, low-conductivity metal alloys, and cermets, composites, reaction products, and combinations comprising at least one of the foregoing materials.

10. (Original) The method of Claim 9, wherein said material is selected from the group consisting of polyimides, polyamideimides, polyamides, polysulfone, polyethersulfone, polytetrafluoroethylene, polyetherketone, and composites, reaction products, and combinations comprising at least one of the foregoing materials.

11. (Original) The method of Claim 1, wherein said managed heat transfer layer further comprises a lubricant component either incorporated into the managed heat transfer layer or placed on its surface.

12. (Original) The method of Claim 11, wherein lubricant is selected from the group consisting of molybdenum disulfide ( $\text{MoS}_2$ ), graphite fluoride ( $\text{CF}_{1.1}$ )<sub>n</sub>, and reaction products and combinations comprising at least one of the foregoing lubricants.

13. (Original) The method of Claim 11, wherein said managed heat transfer layer comprises about 5 wt% to about 60 wt% of said lubricant, based upon the total weight of the managed heat transfer layer.

14. (Original) The method of Claim 13, wherein said managed heat transfer layer comprises about 5 wt% to about 50 wt% of said lubricant, based upon the total weight of the managed heat transfer layer.

15. (Original) The method of Claim 14, wherein said managed heat transfer layer comprises about 10 wt% to about 40 wt% of said lubricant, based upon the total weight of the managed heat transfer layer.

RD28416-1

16. (Original) The method of Claim 11, wherein said lubricant is in the form of a layer disposed on said exposed surface.

17. (Original) The method of Claim 16, wherein said lubricant layer has a thickness of less than or equal to about 1 micrometer.

18. (Original) The method of Claim 17, wherein said thickness is about 0.01 micrometers to about 0.10 micrometers.

19. (Original) The method of Claim 1, wherein said exposed surface further comprises an area of roughness where said exposed surface operably communicates with said mold, wherein said roughness is less than or equal to about 0.50 micrometers, as measured from a plane of said managed heat transfer surface.

20. (Original) The method of Claim 19, wherein said roughness is about 0.20 micrometers to about 0.40 micrometers.

21. (Original) The method of Claim 20, wherein said roughness is about 0.25 micrometers to about 0.30 micrometers.

22. (Currently Amended) The method of Claim 1, wherein a coefficient of friction of greater than or equal to about 0.50 exists in an area of physical contact between said managed heat transfer layer and said ~~support~~ second surface.

23. (Original) The method of Claim 1, wherein said article is a data storage media.

24-61 (Cancelled)

RD28416-1

62. (New) A method for manufacturing an article, comprising:

disposing a managed heat transfer layer in operable communication with a second surface of a stamper, wherein a first surface of said stamper comprises surface features, wherein an exposed surface of said managed heat transfer layer has been mechanically altered;

disposing the stamper in a mold with at least a portion of said exposed surface disposed in operable communication with a mold half;

injecting a molten plastic into said mold;

cooling the plastic to form said article; and

releasing said article from said mold.

63. (New) The method of Claim 62, further comprising forming a thickness of said managed heat transfer layer having a variation of less than about 5%.

64. (New) The method of Claim 63, wherein forming said thickness further comprises surface lapping said exposed surface.

65. (New) The method of Claim 64, wherein said lapping further comprises grinding with sand paper having a grit particle size of less than or equal to about 9 micrometers.

66. (New) The method of Claim 63, wherein said thickness varies less than about 3%.

67. (New) The method of Claim 65, wherein said thickness varies less than about 1%.

68. (New) The method of Claim 66, wherein said thickness varies less than about 0.5%.

69. (New) The method of Claim 62, wherein said managed heat transfer layer comprises a material selected from the group consisting of thermoset materials, plastics, porous metals, ceramics, low-conductivity metal alloys, and cermets, composites, reaction products, and combinations comprising at least one of the foregoing materials.

RD28416-1

70. (New) The method of Claim 69, wherein said material is selected from the group consisting of polyimides, polyamideimides, polyamides, polysulfone, polyethersulfone, polytetrafluoroethylene, polyetherketone, and composites, reaction products, and combinations comprising at least one of the foregoing materials.

71. (New) The method of Claim 62, wherein said managed heat transfer layer further comprises a lubricant component either incorporated into the managed heat transfer layer or placed on its surface.

72. (New) The method of Claim 71, wherein lubricant is selected from the group consisting of molybdenum disulfide ( $\text{MoS}_2$ ), graphite fluoride ( $\text{CF}_{1.1}$ )<sub>n</sub>, and reaction products and combinations comprising at least one of the foregoing lubricants.

73. (New) The method of Claim 71, wherein said managed heat transfer layer comprises about 5 wt% to about 60 wt% lubricant, based upon the total weight of the managed heat transfer layer.

74. (New) The method of Claim 73, wherein said managed heat transfer layer comprises about 5 wt% to about 50 wt% lubricant, based upon the total weight of the managed heat transfer layer.

75. (New) The method of Claim 74, wherein said managed heat transfer layer comprises about 10 wt% to about 40 wt% lubricant, based upon the total weight of the managed heat transfer layer.

76. (New) The method of Claim 71, wherein said lubricant is in the form of a layer disposed on said exposed surface.

77. (New) The method of Claim 76, wherein said lubricant layer has a thickness of less than or equal to about 1 micrometer.

78. (New) The method of Claim 77, wherein said thickness is about 0.01 micrometers to about 0.10 micrometers.

RD28416-1

79. (New) The method of Claim 62, wherein said exposed surface further comprises an area of roughness where said exposed surface operably communicates with said mold, wherein said roughness is less than or equal to about 0.50 micrometers, as measured from a plane of said managed heat transfer surface.

80. (New) The method of Claim 79, wherein said roughness is about 0.20 micrometers to about 0.40 micrometers.